

ABSTRACT

A WDM (Wavelength Division Multiplexing) light source apparatus using a SOA (Semiconductor Optical Amplifier) is disclosed. The WDM light source apparatus includes N SOAs, a 1xN multiplexer/demultiplexer, and a reflective mirror. The N SOAs have one
5 end coated with a substance of a first reflection factor and the other end coated with a substance of a second reflection factor, directly modulate their input signals into optical signals according to a high-speed data signal to be transmitted, and amplify the modulated signal. The 1xN multiplexer/demultiplexer has one end composed of N terminals and the other end composed of one terminal. The N terminals are coupled with the N SOAs. The
10 reflective mirror having a high reflection factor is connected to one terminal of the 1xN multiplexer/demultiplexer to reflect a signal received from the 1xN multiplexer/demultiplexer.

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